

Designing for Efficient Socialization and Ideological Critique

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Occupation: Research Scientist @ Wikimedia

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a muitiiinguai tree encyclopedia

Wiktionary
['wiksənri] n.,
a wiki-based Open
Content dictionary

Wilco ['w/tl kart]

Name: Aaron Halfaker

Occupation: PhD Candidate @ UMN



University of Minnesota



Complex social problem

Complex social problem

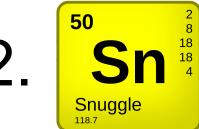
Interesting strategy for a social solution

Complex social problem

- Interesting strategy for a social solution
 - Challenges ideologies
 - Powerful new tool for Wikipedians

1. Wikipedia's success & socio-technical problems

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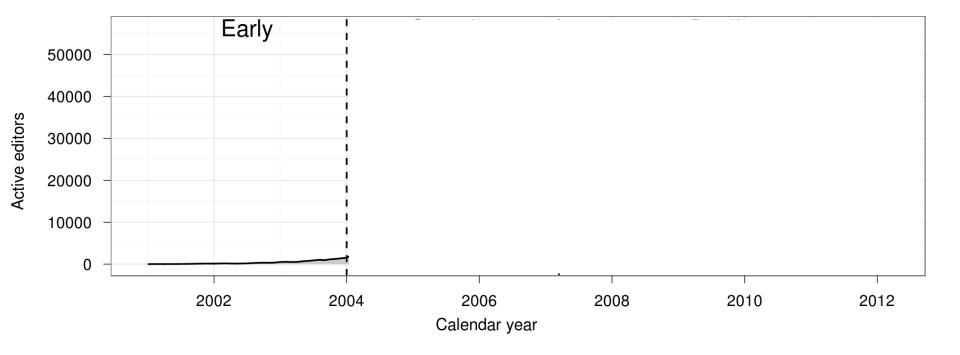


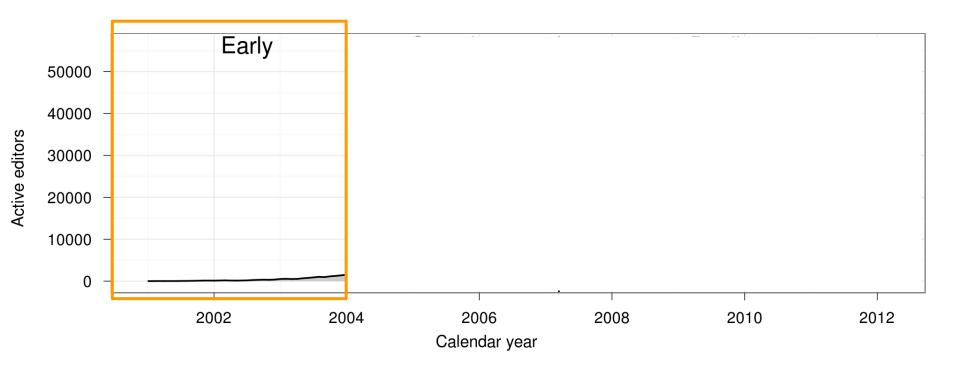
Power socio-technical tool

Means of ideological critique

Part 1.

Wikipedia's socio-technical problems





by his reason;
this singular passion by mind, that by a perseven delight in the continual ai indefatigable generation of the whole of any care pleasure.

WIKIPEDIA

The Free Encyclopedia

Main Page Recent changes Random page Current events

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Special pages Bug reports

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Homepage

From Wikipedia, the free encyclopedia.

On the <u>World Wide Web</u>, a **homepage** is the starting point, or root of a <u>website</u>, a group of pages belonging to the same person, group, business or any other organization. The home page usually includes basic information on the theme of the whole <u>website</u>, and links to other related pages.

<u>Wikipedia</u>'s homepage is the <u>Main Page</u> which outlines the project and gives links into the body of articles.

During the <u>1990s</u>, a homepage often referred to someone's personal page, with information about themselves. This idea of a homepage is being superseded by the <u>blog</u>.

Most <u>web browser</u> applications allow a particular <u>URL</u> to be specified as the homepage for the browser: the <u>web page</u> which is displayed when the application is started.

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Main Page

From Wikipedia, the free encyclopedia.

<u>Wikipedia</u> is a <u>multilingual</u> project to create an accurate and comprehensive, <u>free-content</u> encyclopedia. We started in January 2001 and are currently working on 203744 <u>articles</u> in the English version. Visit the <u>help page</u> and experiment in the <u>sandbox</u> to learn how **you** can edit any article right now.

Selected Articles

In the news: Peter Beattie - Hans Blix - Sri Lanka - Moscow Metro - Ricin incident
Recent deaths: Rebeca Martinez - Abdul Rahman Munif - Eleanor Holm - Carlie Bruscia
New articles: US Eighth Army - Trugernanna - William Jessop - Superb Fairy-wren
Featured articles: Paradox - Chess - Éire - Io (moon) - White Rose - Vampire - Punk rock
Anniversaries: February 9 - The Beatles on The Ed Sullivan Show - Mandaluyong City Hollywood Walk of Fame - Volleyball - Emperor Zeno - The Simpsons

Encyclopedia

Mathematical and Natural Sciences

<u>Astronomy</u> - <u>Biology</u> - <u>Chemistry</u> - <u>Computer science</u> - <u>Earth science</u> - <u>Ecology</u> - <u>Health science</u> - <u>Mathematics</u> - <u>Physics</u> - <u>Statistics</u>

Applied Arts and Sciences

Agriculture - Architecture - Business - Communication - Education - Engineering - Family and consumer science - Government - Law - Library and information science - Medicine - Politics - Public affairs - Software engineering - Technology - Transport

Social Sciences and Philosophy

<u>Anthropology</u> - <u>Archaeology</u> - <u>Economics</u> - <u>Geography</u> - <u>History</u> - <u>History</u> of <u>science</u> and <u>technology</u> - <u>Language</u> - <u>Linguistics</u> - <u>Mythology</u> - <u>Philosophy</u> - <u>Political</u> science - <u>Psychology</u> - <u>Sociology</u>

Culture and Fine Arts

Community

Writing Articles

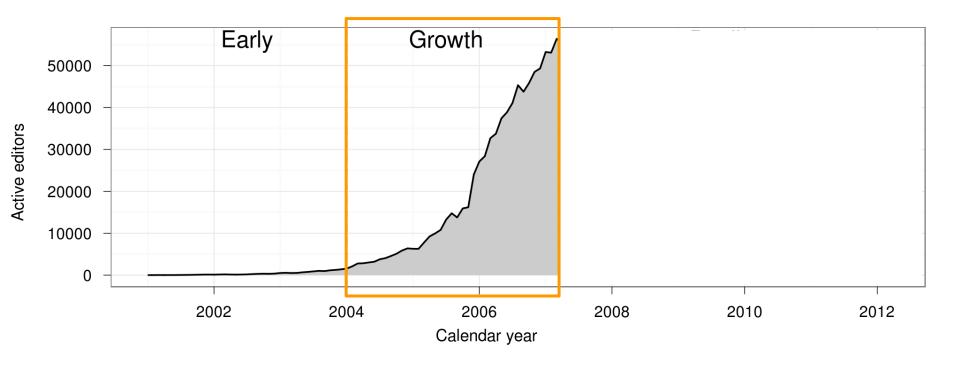
Welcome, newcomers - Policy - Copyrights - How to edit - Guide to layout and style - WikiCivics - Public domain and shared resources - Requested articles and pictures - Featured articles and pictures - Reference desk - Projects

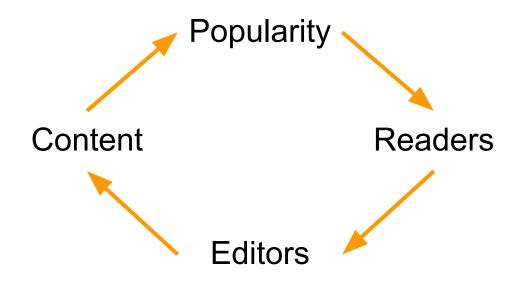
About the Project

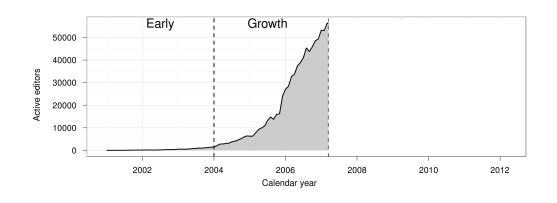
About Wikipedia - Wikimedia - Announcements - FAQ - Contact us - Village pump - Chat - Mailing lists - Moderator BBS - Wikipedians - Friends of Wikipedia - Utilities - Software - Statistics - Donations - Download Wikipedia: SQL dumps - TomeRaider format - Wikipedia press coverage: Google News - Yahoo! News

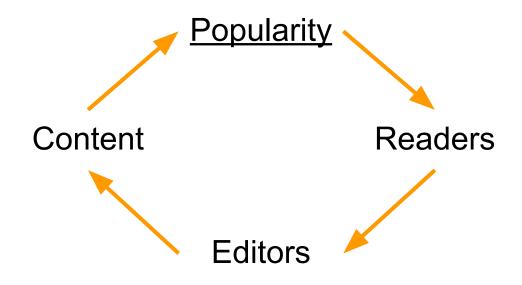
In Other Languages

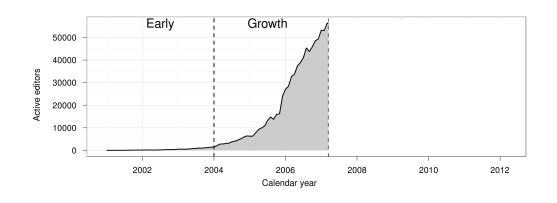
<u>Wikipedia language list - Afrikaans - العربية (Araby) - Bahasa Melayu -</u> Bosanski - Български (Bulgarian) - Català - Česká - Corsu - Cymraeg - Dansk -

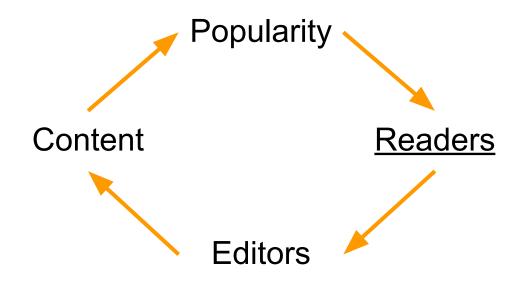


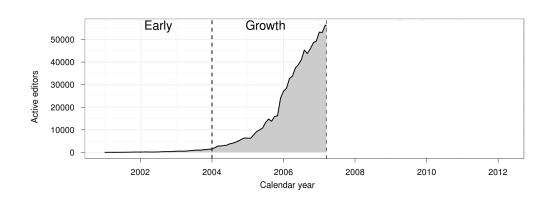


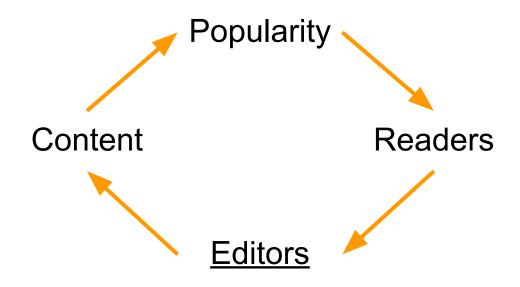


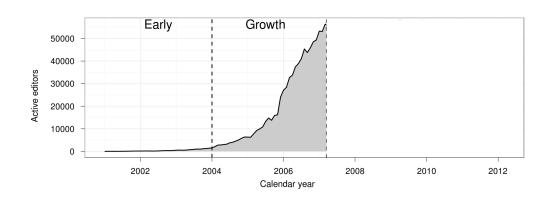


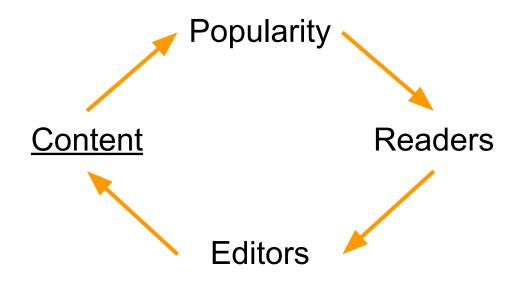


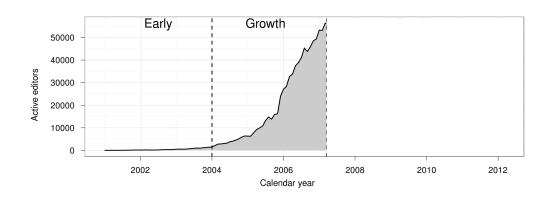


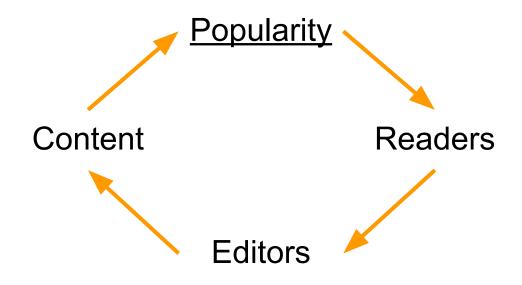


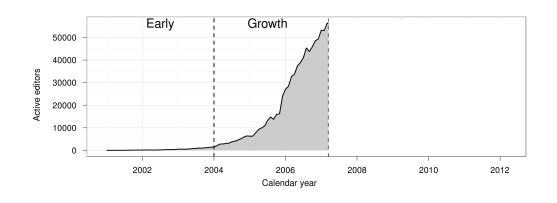


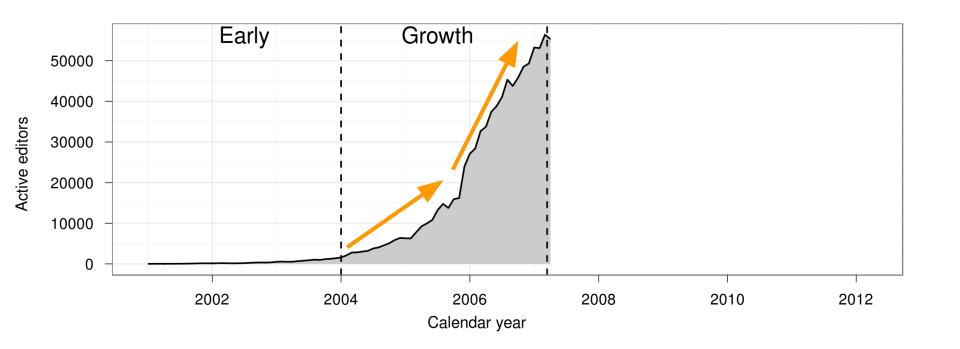










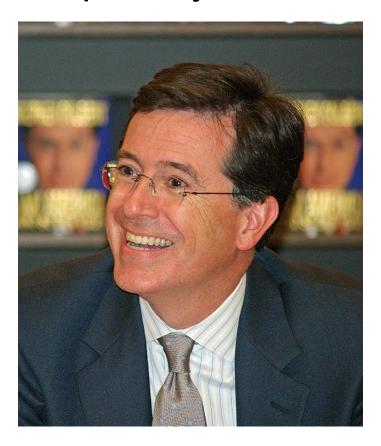


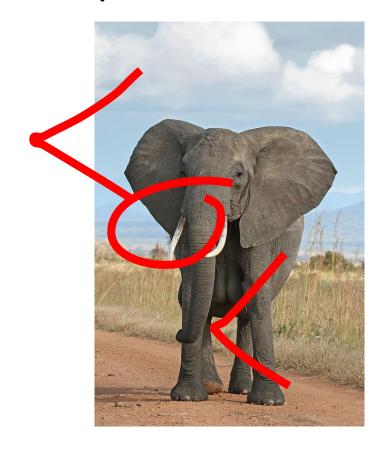
Popularity → Vandalism & Spam

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Popularity → Vandalism & Spam





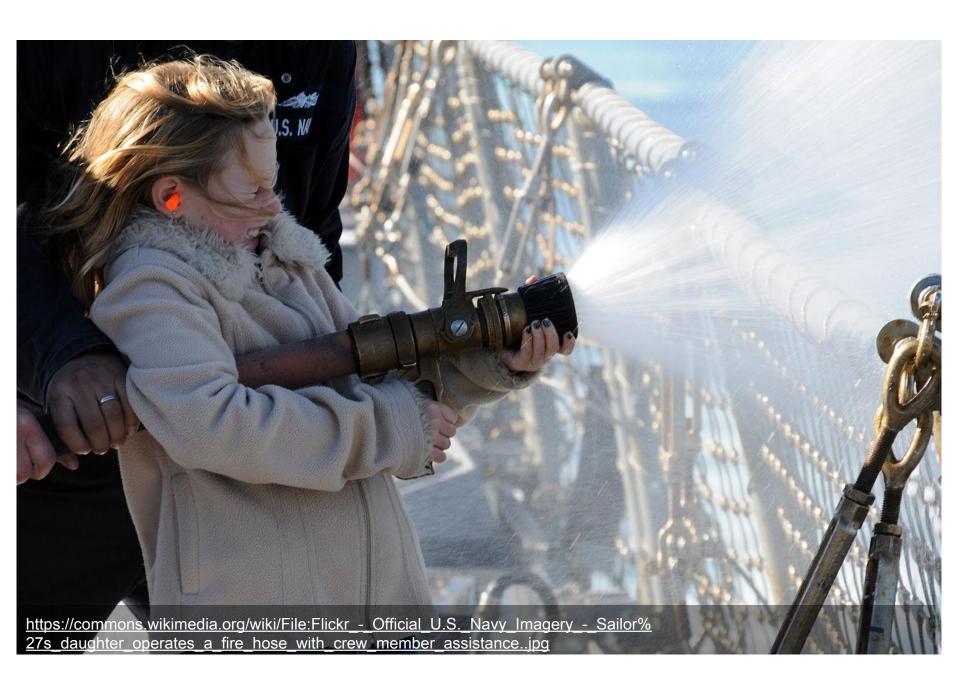
Popularity → Vandalism & Spam

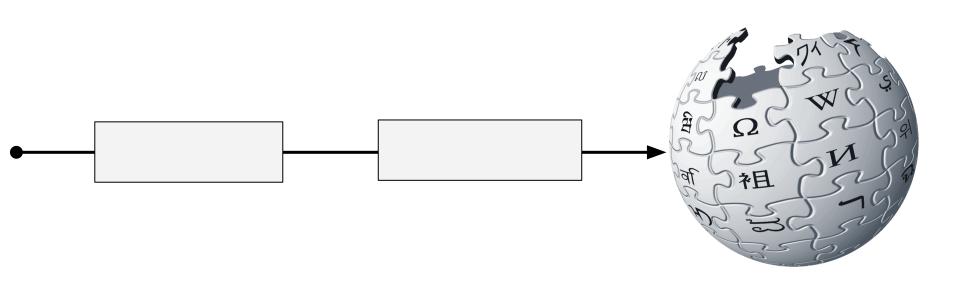


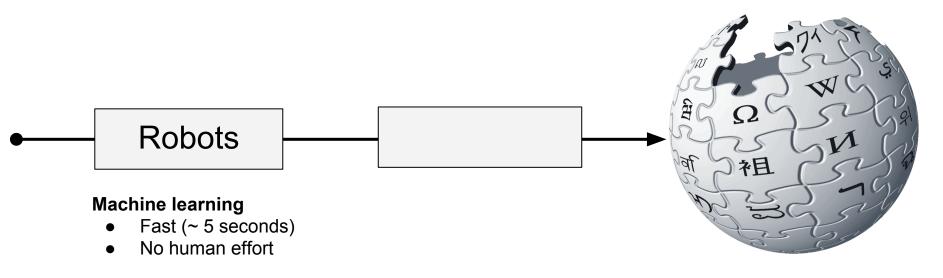
West, A. G. et al. (2011). Link spamming Wikipedia for profit. In *Proceedings of the 8th Annual Collaboration, Electronic messaging, Anti-Abuse and Spam Conference* (pp. 152-161). ACM.

WIKIMANIA '06 TOENTIFYING AND ELIMINATING ROLLS

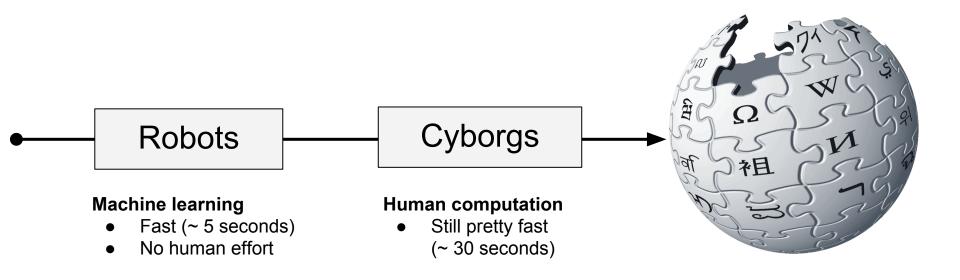






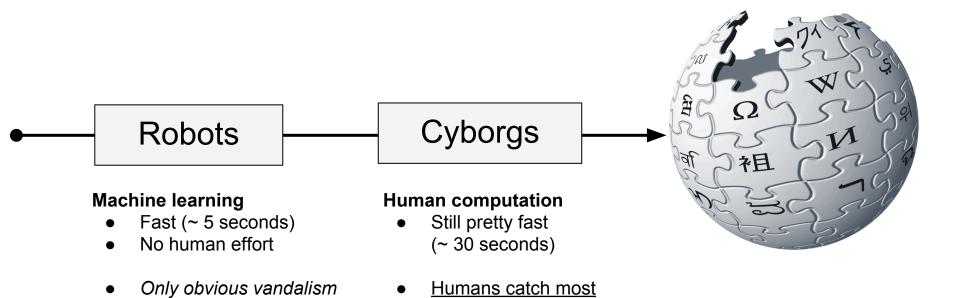


Only obvious vandalism



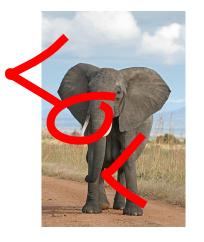
Humans catch most vandalism at a glance

Only obvious vandalism



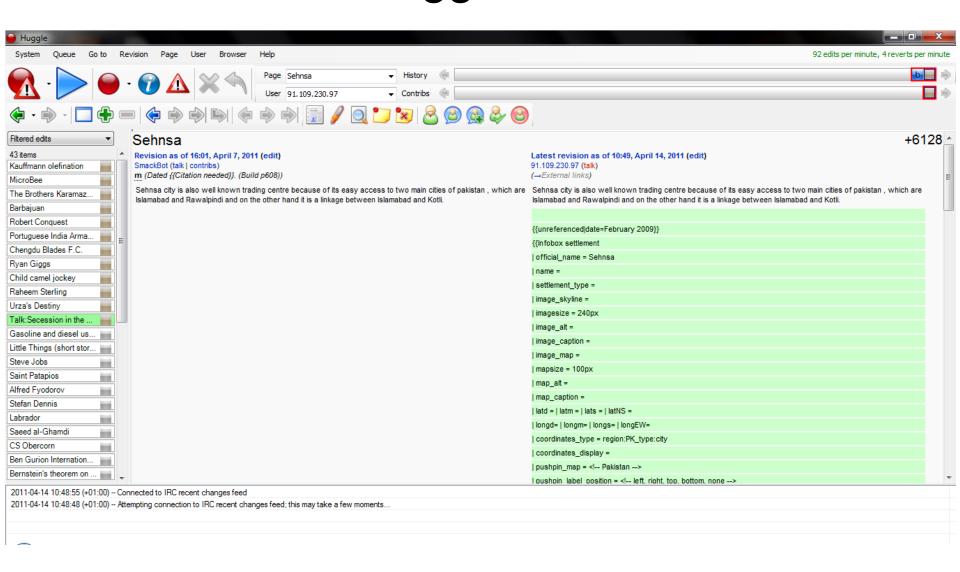
Humans catch most vandalism at a glance

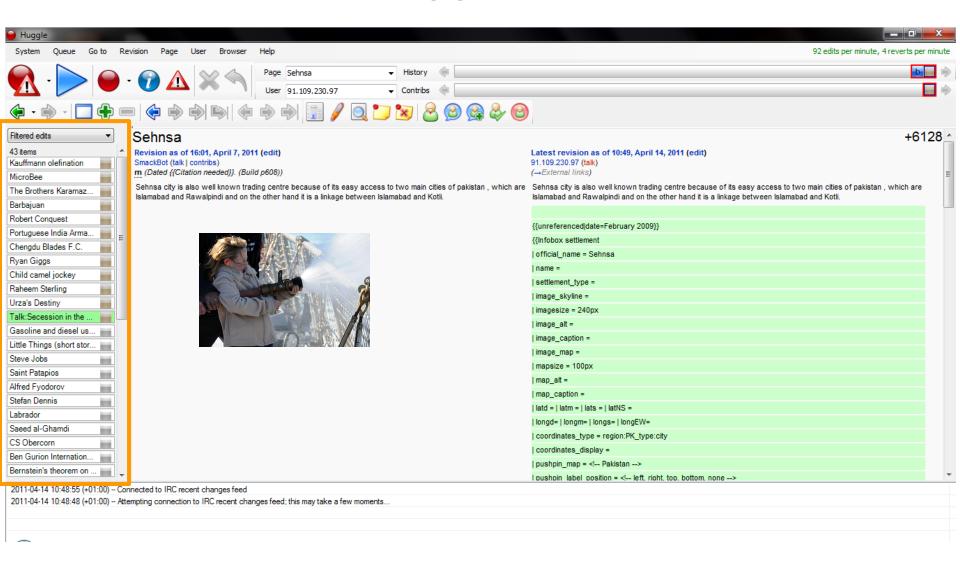


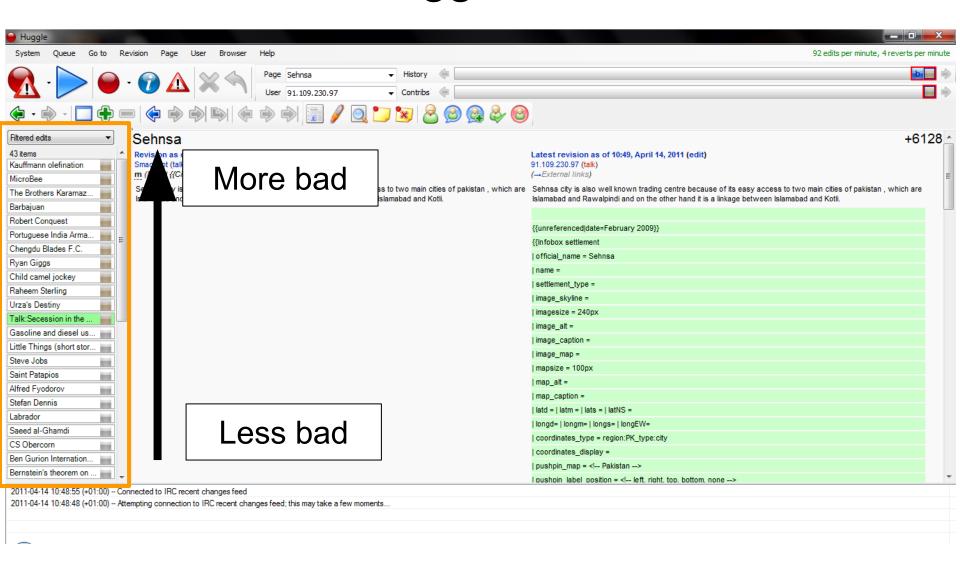


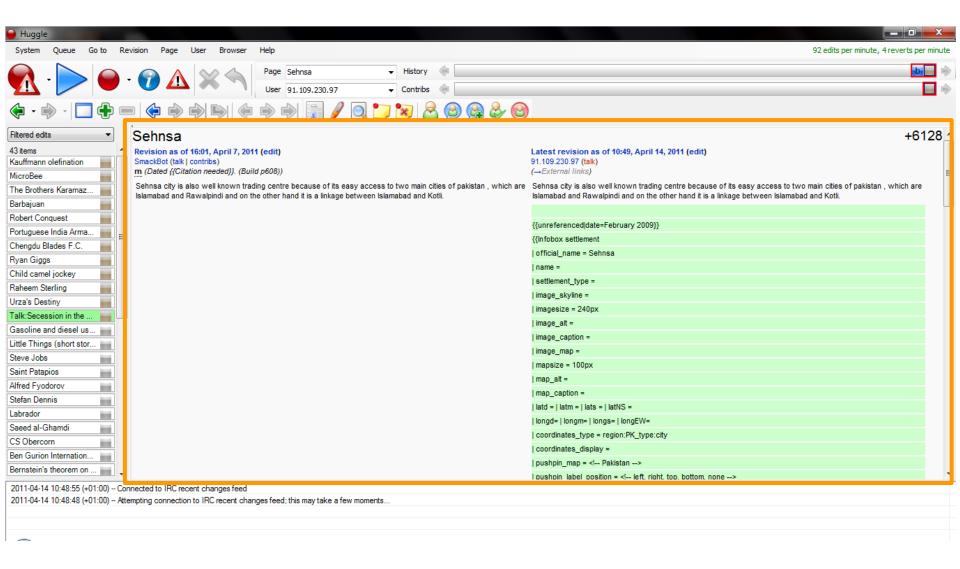


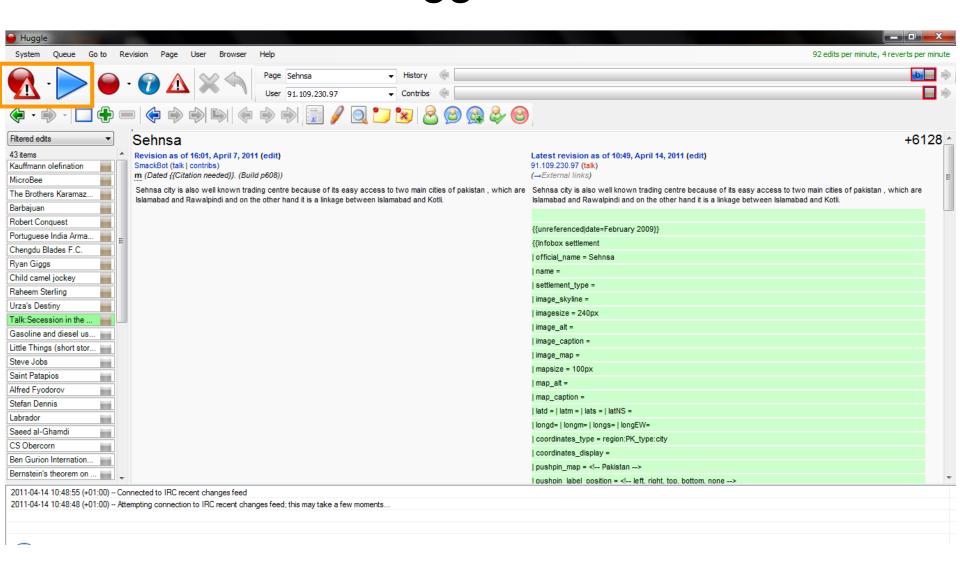












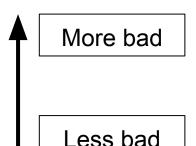
 Wikipedia is a firehose of contributions that need review.



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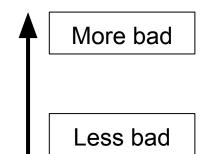
 Use algorithms to triage & deal with most suspicious first



 Wikipedia is a firehose of contributions that need review.



Use algorithms to triage & deal with most suspicious first



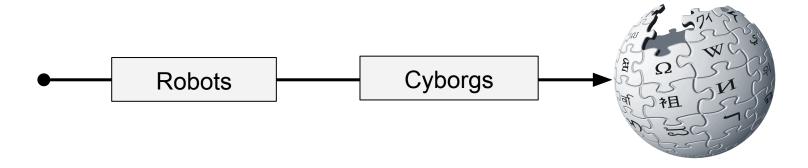
 Reject contributions that don't meet standards.



Wild Success!

Saved Wikipedia from vandalism[1,3]

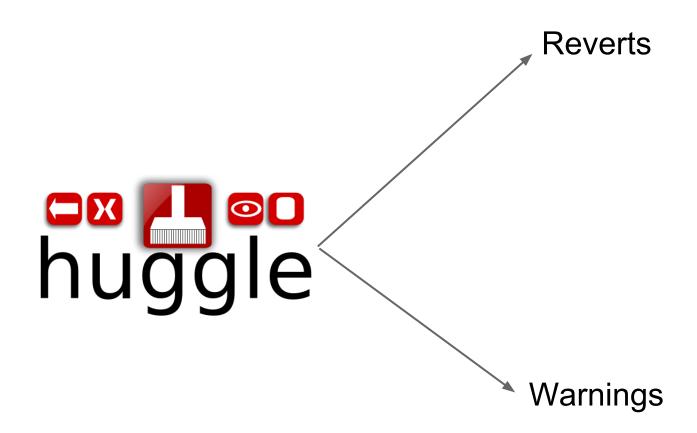
Dramatically reduced Wikipedian effort[2]



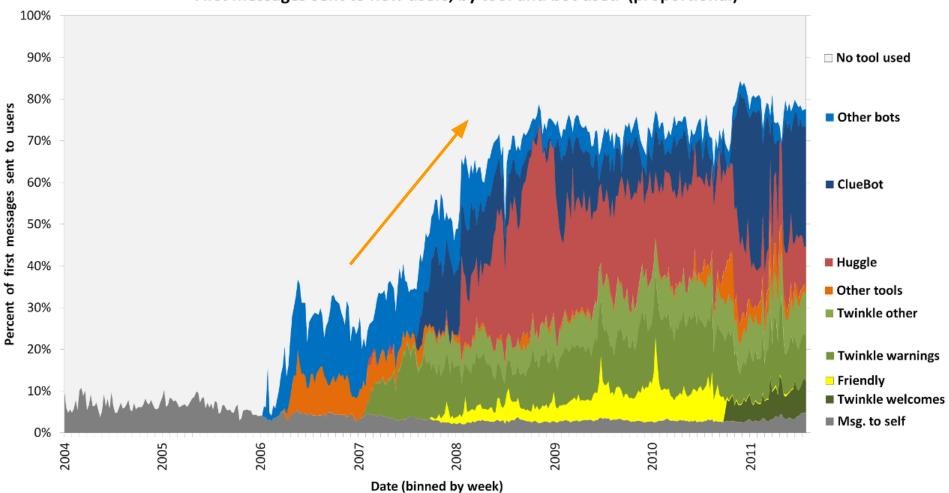
- 1. Priedhorsky, R. et al. (2007). Creating, destroying, and restoring value in Wikipedia. GROUP (pp. 259-268). ACM.
- 2. Halfaker, A. Vandal Fighter Work Load. (2011). https://meta.wikimedia.org/wiki/Research: Vandal fighter work load
- 3. Geiger, R. S., & Halfaker, A. (2013). When the levee breaks: without bots, what happens to Wikipedia's quality control processes? *WikiSym* (p. 6). ACM.

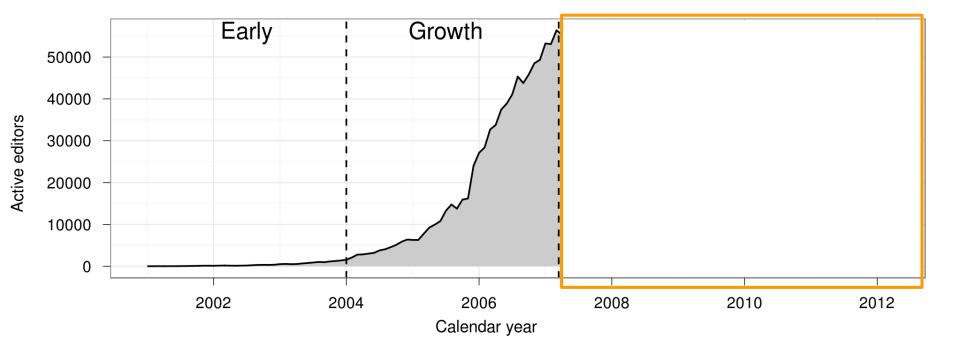
But...

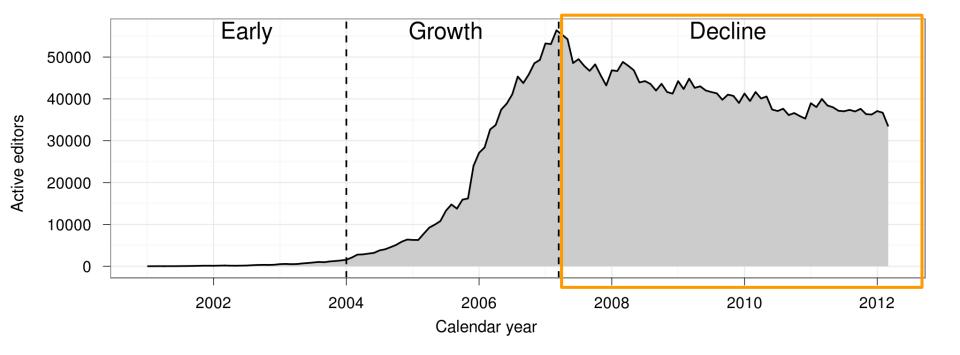
There's some unforeseen consequences



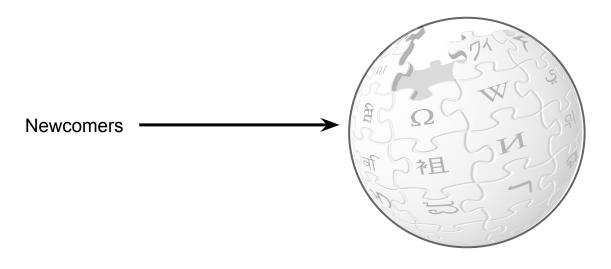
First messages sent to new users, by tool and bot used (proportional)

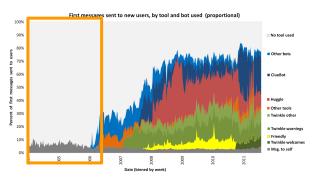






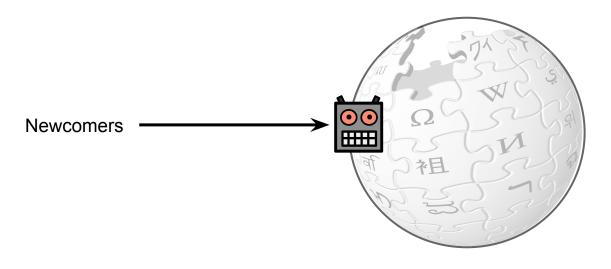
What happened?

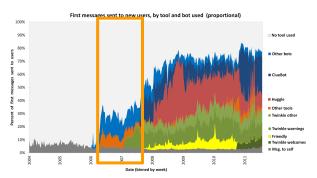




1. Halfaker, A., Gieger, R. S., Morgan, J., & Riedl, J. (2013). The Rise and Decline of an Open Collaboration System: *American Behavioral Scientist* 57(5) 664-688.

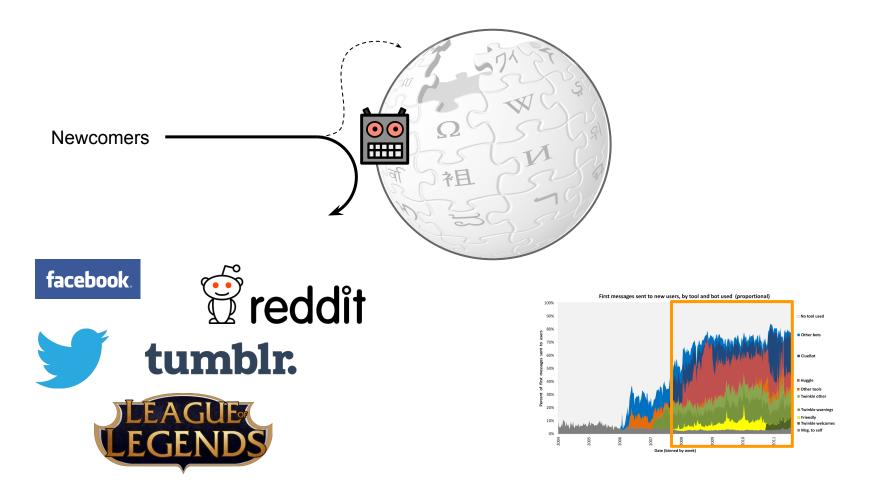
What happened?





1. Halfaker, A., Gieger, R. S., Morgan, J., & Riedl, J. (2013). The Rise and Decline of an Open Collaboration System: *American Behavioral Scientist* 57(5) 664-688.

What happened?



1. Halfaker, A., Gieger, R. S., Morgan, J., & Riedl, J. (2013). The Rise and Decline of an Open Collaboration System. *American Behavioral Scientist* 57(5) 664-688.

What can be done?

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Efficient quality control is necessary

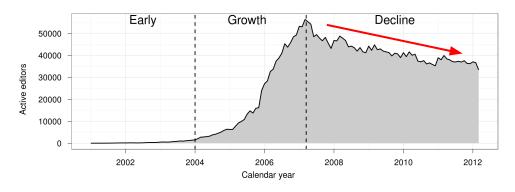


What can be done?

Efficient quality control is necessary



Socializing new editors is necessary



Part 2



Part 2

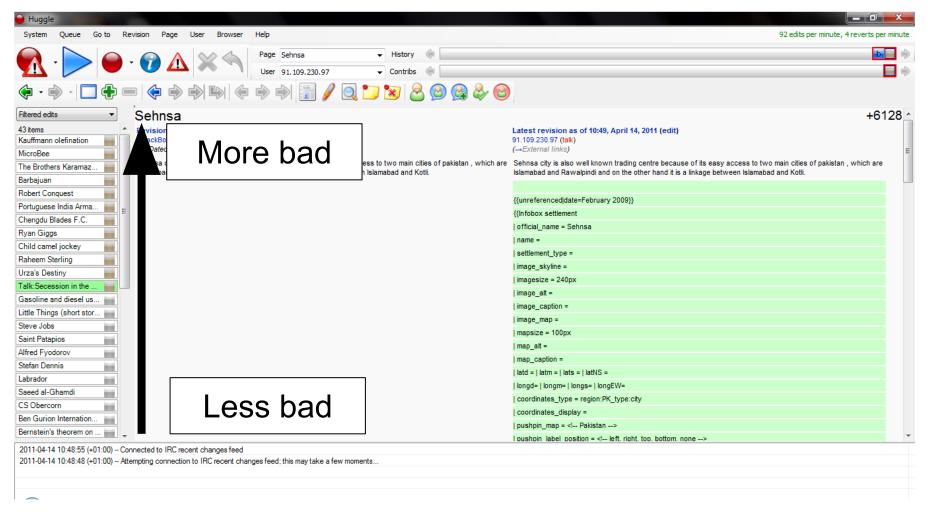


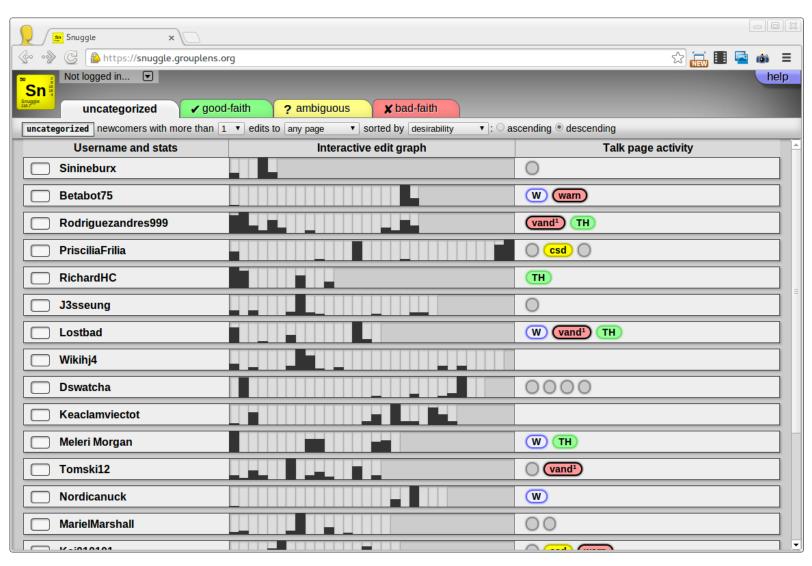
VS.



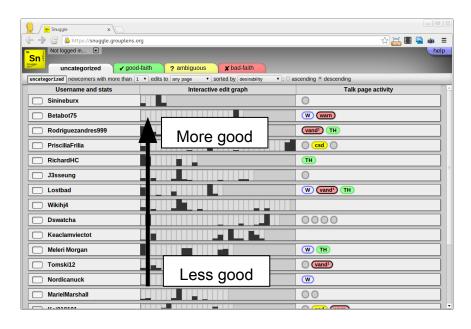
Newcomer socialization

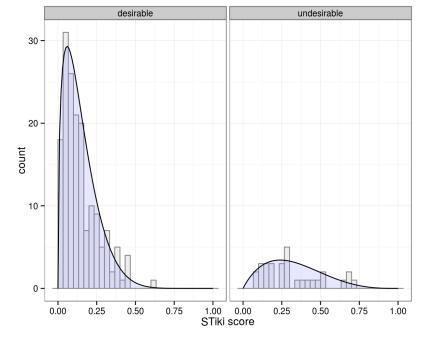
Countervandalism

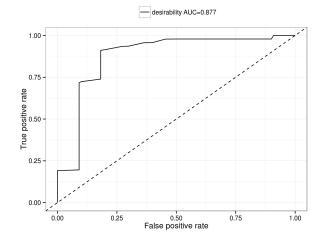




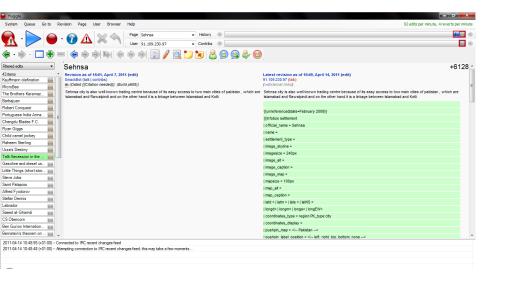








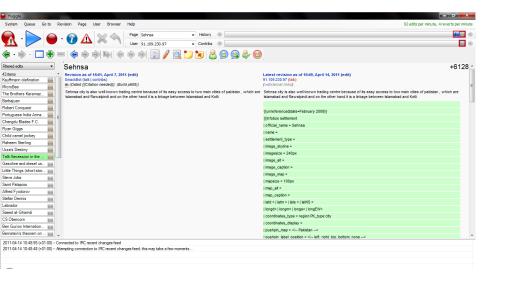
1st day's edits: 0.877 AUC



Warning template levels:

- 1
- 2
- 3
- 4
- Notify the admins!

1. Geiger, R. S., & Ribes, D. (2010). The work of sustaining order in wikipedia. *CSCW* (pp. 117-126). ACM.

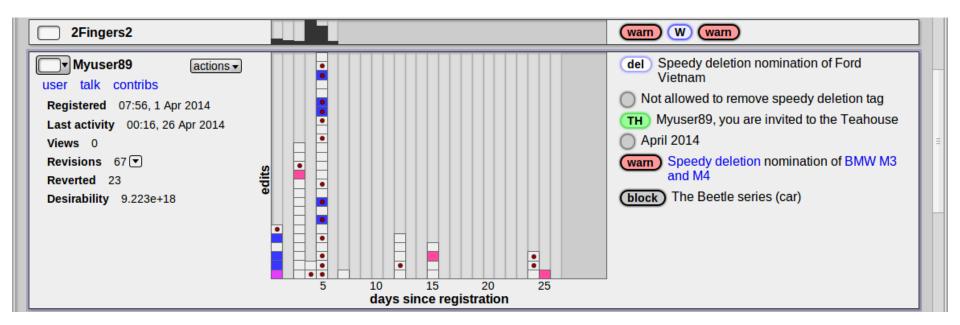


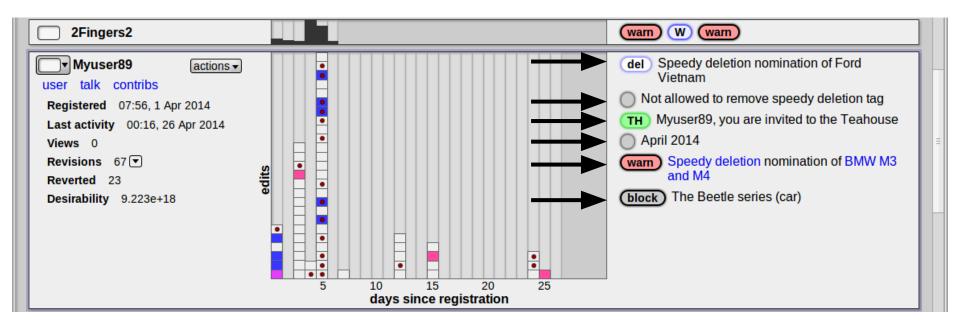
Warning template levels:

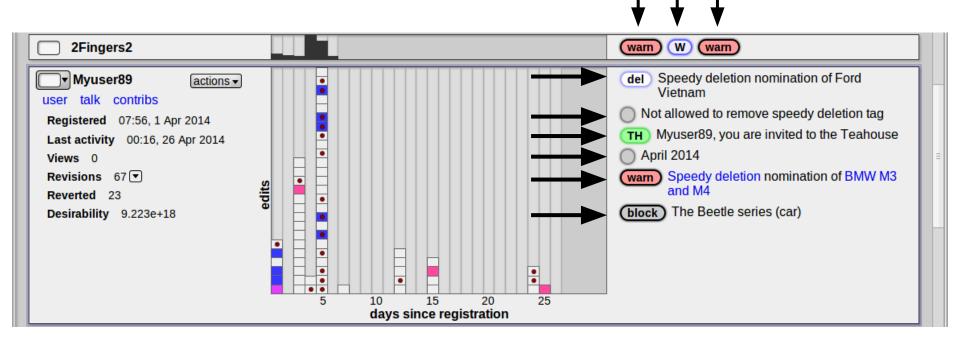
- 1
- 2
- 3
- 4
- → Notify the admins!

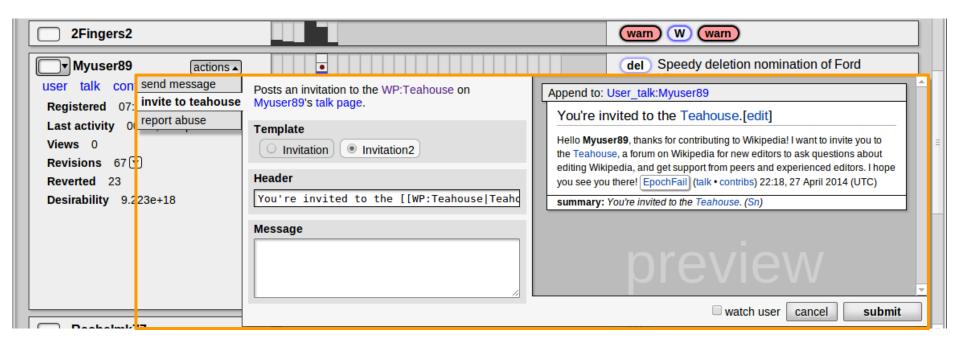
Transparent to the user.

1. Geiger, R. S., & Ribes, D. (2010). The work of sustaining order in wikipedia. *CSCW* (pp. 117-126). ACM.



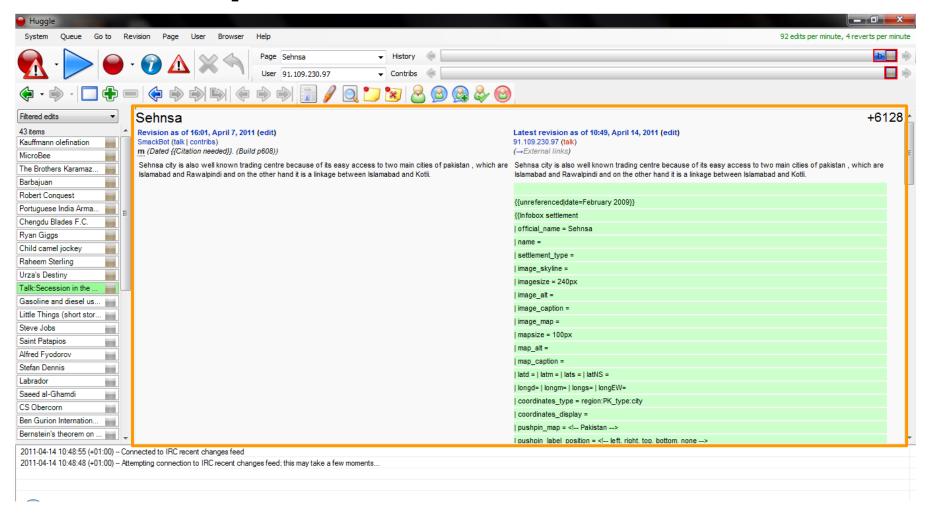


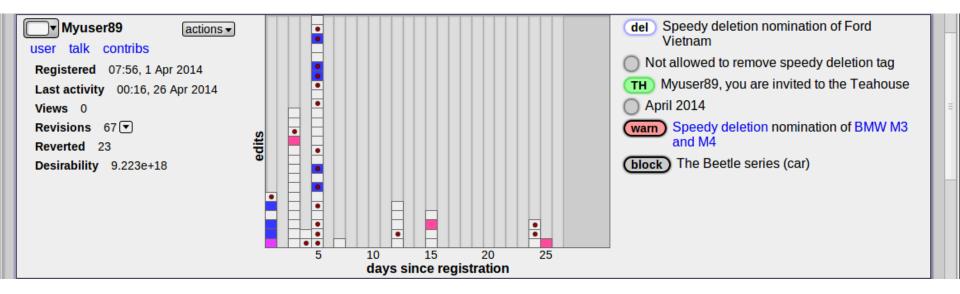


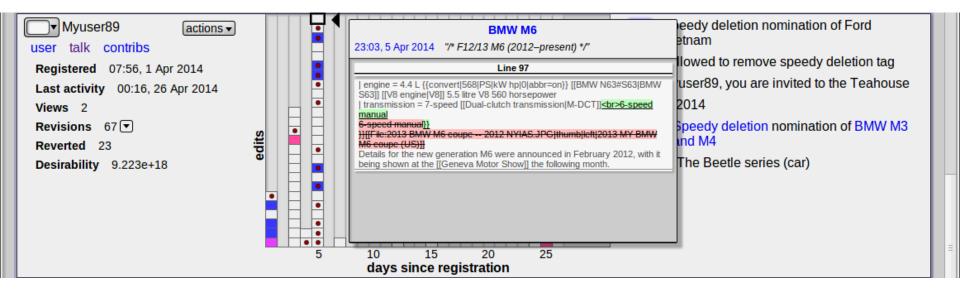


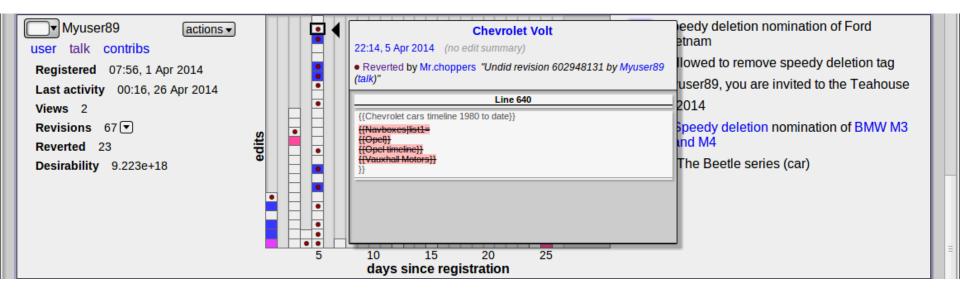
Holistic picture of another human

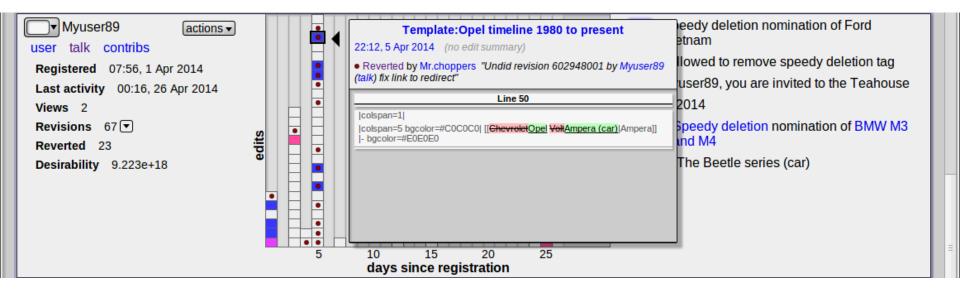
Holistic picture of another human

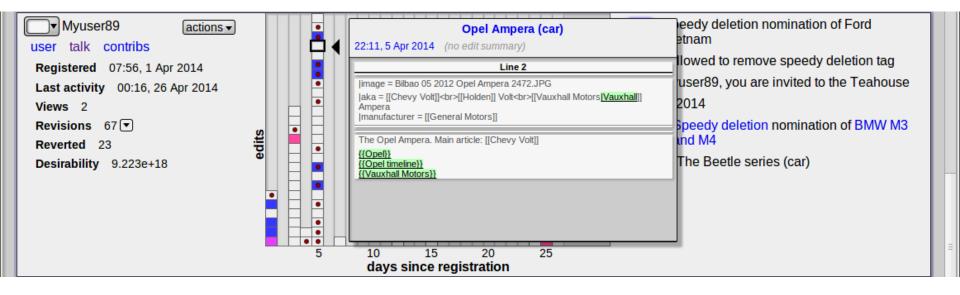


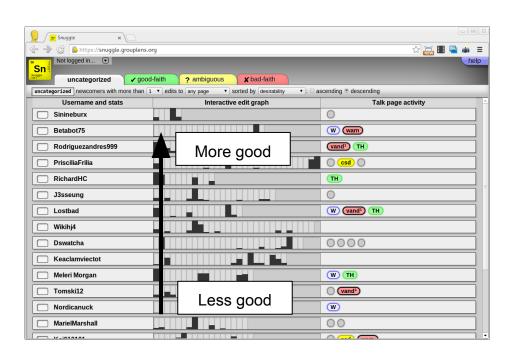


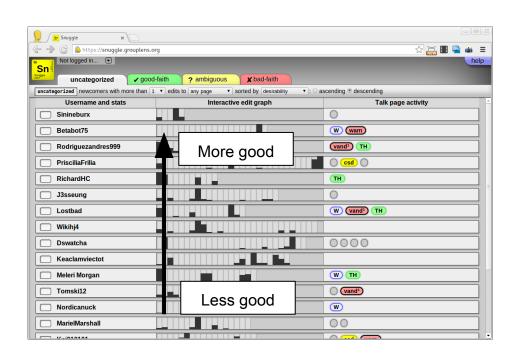


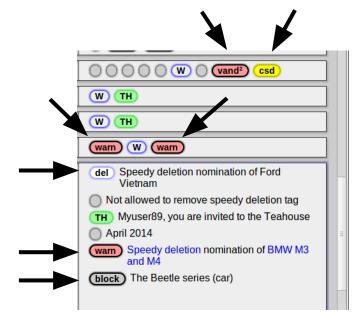












Interviewee #10:

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I don't see why this guy was reverted.

Interviewee #10:

I don't see why this guy was reverted.

I don't see how this is vandalism.

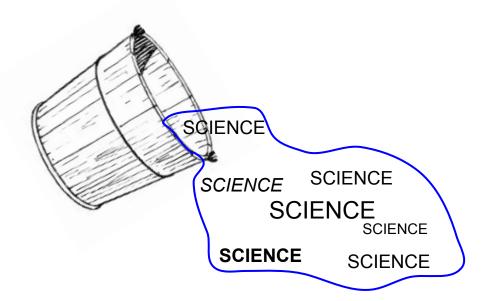
Interviewee #10:

I don't see why this guy was reverted.

I don't see how this is vandalism.

This is a false positive.

Thanks!



NSF Funding

- IIS 11-11201
- IIS 08-08692

My collaborators

- R. Stuart Geiger
- Loren Terveen

Aaron Halfaker ahalfaker@wikimedia.org

Send me emails about science, Wikipedia, the internet or whatever.

Ping me (halfak) in #wikimedia-research on freenode

http://snuggle.grouplens.org



